

Digital Photography of Prescription Oral Solid Dosage Formulations: A Review of NLM Projects and Results

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Administrivia

- ▶ WiFi available in this room
 - SSID NLM-BOR-Guest
 - WPA password: NLM312ap\$ecurity
 - Encryption: AES
- ▶ Restrooms across the hall
- ▶ Working meeting of the SPL Working Group Leadership Team
 - Lunch either in the cafeteria at NLM or Building 45
- ▶ Transportation –
 - Taxis can be called to NLM for you at the end of the day.
 - We'll poll the room for transportation needs

Thank you

- ▶ Thank you to SIS, David Hale, for his organization...
- ▶ Thank you to the sponsors and respondents to the NLM FR Notice

Grateful for the invitation to present these materials.

- Mostly a technical presentation
- Answer questions and dispel misunderstandings
- Gather information regarding concerns, respond
- Help provide a path forward

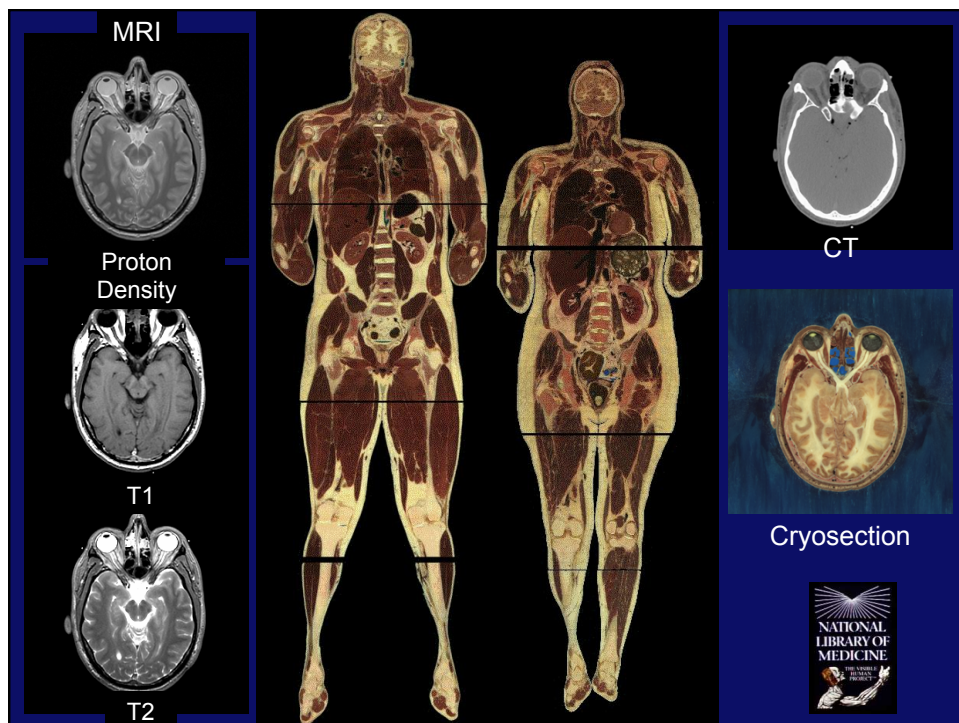
Welcome

- ▶ Introductions - Groups
 - NLM Specialized Information Systems
 - NLM Library Operations
 - Medicos
 - FDA
- ▶ Introductions – Projects/Products
 - DailyMed
 - Pillbox
 - C3PI: Computational Photography Project for Pill Identification

NLM

- ▶ World's Largest Medical Library
- ▶ Leading source of public biomedical information
 - PubMed
 - Genbank
 - MeSH
 - UMLS
- ▶ NIH IC - Research Divisions: Promoting Open Science
 - Insight Toolkit
 - Visible Human Project

Public domain data



Who we are

- ▶ HPCC – Terry Yoo, Michael Ackerman, Brad Lowekamp
- ▶ SIS – David Hale, Florence Chang, Gale Dutcher, Steven Phillips
- ▶ Medicos – Pablo Perillan, Andrew Bond, Yuri Huta, Kady Flannery, others
- ▶ FDA – Teresa Watkins-Lackey, Dr. Randy Levin, Lonnie Smith, Bill Hess

Clarifications

The driving motivation is consumer safety.

- ▶ DailyMed
 - Information product of NLM Library Operations
 - Established collaboration with FDA SPL
- ▶ PillBox
 - Information product of NLM Specialized Information Systems
 - Needed to establish digital content
 - Promoting voluntary contributions of Rx products
- ▶ C3PI: Computational Photography Project for Pill Identification
 - Computer vision research project of NLM LHC/HPCC
 - Needed to establish digital content
 - Developing inventory through direct purchase of Rx products
 - Requires a deep understanding of digital macrophotography

Why is this effort difficult?

► Pills.com



► VA



Why is this effort difficult (continued)?

► VA (continued)



Overview of NLM Rx Digital Photography

- ▶ 2003 – Usage study conducted by NLM
- ▶ 2004 – Study begins between NLM and the VA
- ▶ 2009 – Current round of pill photography projects begin
 - May 2009 – Digital Macrophotography Expert Panel
 - August 2009 - PillBox RFP
- ▶ 2010 – ARRA funding
 - Feb 2010 – C3PI RFP
- ▶ 2011 – Commercial Participation
 - May 2011 – NLM PillBox FR Notice
 - Nov 2011 – C3PI supports PillBox in data acquisition
- ▶ 2012 – Initial Deliverables
 - March 2012 – SPLIMAGE Specifications
 - June 2012 – FR Notice digital images delivered

State of the Project

- ▶ Currently two photographic laboratories
 - Baltimore County
 - Gaithers Road
- ▶ Currently accepting new voluntary product submissions
- ▶ SPLIMAGE Specification completed
- ▶ 144 Oral Solid Dosage Forms photographed from the FR notice responses
- ▶ 26-28 SPLIMAGE files have been registered with FDA
- ▶ 1430+ images acquired from the C3PI project
 - Preparing SPLIMAGE files from these data
- ▶ Next steps...
- ▶ Questions?